

O/P/E

Serial Number: 09 645, 321ENTERED *O/S/2*

AU 1652

RECEIVED

#

- Changed a file from non-ASCII to ASCII *74*
- Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- Edited a format error in the Current Application Data section, specifically:
-
- Edited the Current Application Data section with the actual current number. The number inputted by the applicant was the prior application data; or other _____.
- Added the mandatory heading and subheadings for "Current Application Data".
- Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- Changed the spelling of a mandatory field (the headings or subheadings), specifically:
-
- Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were:
-
- Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:
-
- Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- Inserted colons after headings/subheadings. Headings edited included:
-
- Deleted extra, invalid, headings used by an applicant, specifically:
-
- Deleted: non-ASCII "garbage" at the beginning/end of files; secretary initials/filename at end of file; page numbers throughout text; other invalid text, such as _____.
- Inserted mandatory headings, specifically:
-
- Corrected an obvious error in the response, specifically:
-
- Edited identifiers where upper case is used but lower case is required, or vice versa.
-
- Corrected an error in the Number of Sequences field, specifically:
-
- A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- Deleted *ending* stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected:
- Other:
-
-
-

*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

3/1/95

6.6.2000

TECH CENTER 1600/2000
OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/645,321

DATE: 09/14/2000
TIME: 16:50:58

Input Set : A:\Cpg.pto
Output Set: N:\CRF3\09142000\I645321.raw

3 <110> APPLICANT: Satoshi KOIZUMI
4 Kazuhiko TABATA
5 Tetsuo ENDO
6 Akio OZAKI
8 <120> TITLE OF INVENTION: Process for producing N-acetylneuraminic acid
10 <130> FILE REFERENCE: 11229
C--> 12 <140> CURRENT APPLICATION NUMBER: US/09/645,321
C--> 12 <141> CURRENT FILING DATE: 2000-08-25
12 <150> PRIOR APPLICATION NUMBER: H11-212670
13 <151> PRIOR FILING DATE: 1999-08-30
15 <160> NUMBER OF SEQ ID NOS: 8
17 <170> SOFTWARE: PatentIn Ver. 2.0
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 391
21 <212> TYPE: PPT
22 <213> ORGANISM: Synechocystis sp.(PCC6803)
24 <400> SEQUENCE: 1
25 Met Ile Ala His Arg Arg Gln Glu Leu Ala Gln Gln Tyr Tyr Gln Ala
26 1 5 10 15
28 Leu His Gln Asp Val Leu Pro Phe Thr Gln Lys Tyr Ser Leu Asp Arg
29 20 25 30
31 Gln Gly Gly Tyr Phe Thr Cys Leu Asp Arg Lys Gly Gln Val Phe
32 35 40 45
34 Asp Thr Asp Lys Phe Ile Trp Leu Gln Asn Arg Gln Val Trp Gln Phe
35 50 55 60
37 Ala Val Phe Tyr Asn Arg Leu Glu Pro Lys Pro Gln Trp Leu Glu Ile
38 65 70 75 80
40 Ala Arg His Gly Ala Asp Phe Leu Ala Arg His Gly Arg Asp Gln Asp
41 85 90 95
43 Gly Asn Trp Tyr Phe Ala Leu Asp Gln Glu Gly Lys Pro Leu Arg Gln
44 100 105 110
46 Pro Tyr Asn Val Phe Ser Asp Cys Phe Ala Ala Met Ala Phe Ser Gln
47 115 120 125
49 Tyr Ala Leu Ala Ser Gly Ala Gln Glu Ala Lys Ala Ile Ala Leu Gln
50 130 135 140
52 Ala Tyr Asn Asn Val Leu Arg Arg Gln His Asn Pro Lys Gly Gln Tyr
53 145 150 155 160
55 Glu Lys Ser Tyr Pro Gly Thr Arg Pro Leu Lys Ser Leu Ala Val Pro
56 165 170 175
58 Met Ile Leu Ala Asn Leu Thr Leu Glu Met Glu Trp Leu Leu Pro Pro
59 180 185 190
61 Thr Thr Val Glu Glu Val Leu Ala Gln Thr Val Arg Glu Val Met Thr
62 195 200 205
64 Asp Phe Leu Asp Pro Glu Ile Gly Leu Met Arg Glu Ala Val Thr Pro
65 210 215 220
67 Thr Gly Glu Phe Val Asp Ser Phe Glu Gly Arg Leu Leu Asn Pro Gly
68 225 230 235 240

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/645,321

DATE: 09/14/2000
TIME: 16:59:58

Input Set : A:\Cpg.pto
Output Set: N:\CRF3\09142000\I645321.raw

70 His Gly Ile Glu Ala Met Trp Phe Met Met Asp Ile Ala Gln Arg Ser
71 215 250 255
73 Gly Asp Arg Gln Leu Gin Glu Gln Ala Ile Ala Val Val Leu Asn Thr
74 260 265 270
76 Leu Glu Tyr Ala Trp Asp Glu Glu Phe Gly Gly Ile Phe Tyr Phe Leu
77 275 280 285
79 Asp Arg Gln Gly His Pro Pro Gln Gln Leu Glu Trp ASP Gln Lys Leu
80 290 295 300
82 Trp Trp Val His Leu Glu Thr Leu Val Ala Leu Ala Lys Gly His Gln
83 305 310 315 320
85 Ala Thr Gly Gln Glu Lys Cys Trp Gln Trp Phe Glu Arg Val His Asp
86 325 330 335
88 Tyr Ala Trp Ser His Phe Ala Asp Pro Glu Tyr Gly Glu Trp Phe Gly
89 340 345 350
91 Tyr Leu Asn Arg Arg Gly Glu Val Leu Leu Asn Leu Lys Gly Gly Lys
92 355 360 365
94 Trp Lys Gly Cys Phe His Val Pro Arg Ala Leu Trp Leu Cys Ala Glu
95 370 375 380
97 Thr Leu Gln Leu Pro Val Ser
98 385 390
101 <210> SEQ ID NO: 2
102 <211> LENGTH: 1173
103 <212> TYPE: DNA
104 <213> ORGANISM: Synechocystis sp.(PCC6803)
106 <100> SEQUENCE: 2
107 atg att gcc cat cgc cgt cag gaa tta gcc cag caa tat tac cag gct 18
108 Met Ile Ala His Arg Arg Gln Glu Leu Ala Gln Gln Tyr Tyr Gln Ala
109 1 5 10 15
111 tta cac cag gac gta ttg ccc ttt tgg gaa aaa tat tcc ctc gat cgc 96
112 Leu His Gin Asp Val Leu Pro Phe Trp Glu Lys Tyr Ser Leu Asp Arg
113 20 25 30
115 cag ggg ggc ggt tac ttt acc tgc tta gac cgt aaa gnc cag gtt ttt 144
116 Gln Gly Gly Tyr Phe Thr Cys Leu Asp Arg Lys Gly Gln Val Phe
117 35 40 45
119 gac aca gat aaa ttc att tgg fta caa aac cgt cag gta tgg cag ttt 192
120 Asp Thr Asp Lys Phe Ile Trp Leu Gln Asn Arg Gln Val Trp Gln Phe
121 50 55 60
123 gcc gtt ttc tac aac cgt ttg gaa cca aaa ccc caa tgg tta gaa att 240
124 Ala Val Phe Tyr Asn Arg Leu Glu Pro Lys Pro Gln Trp Leu Glu Ile
125 65 70 75 80
127 gcc cgc cat ggt gct gat gat ttt tta gct cgc cac ggc cga gat caa gac 288
128 Ala Arg His Gly Ala Asp Phe Leu Ala Arg His Gly Arg Asp Gln Asp
129 85 90 95
131 ggt aat tgg tat ttt gct ttg gat cag gaa ggc aaa ccc ctg cgt caa 336
132 Gly Asn Trp Tyr Phe Ala Leu Asp Gln Glu Gly Lys Pro Leu Arg Gln
133 100 105 110
135 ccc tat aac gtt ttt tcc gat tgc ttc gct gcc atg gcc ttt agt caa 384
136 Pro Tyr Asn Val Phe Ser Asp Cys Phe Ala Ala Met Ala Phe Ser Gln
137 115 120 125

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/645,321 DATE: 09/14/2000
TIME: 16:50:58

Input Set : A:\Cpg.pto
Output Set: N:\CRF3\09142000\I645321.raw

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|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| 139 | tat | gcc | tta | gcc | aat | ggg | ccq | cag | gaa | gtc | aaa | gcc | att | gcc | ctg | cag | | 132 |
| 140 | Tyr | Ala | Leu | Ala | Ser | Gly | Ala | Gln | Glu | Ala | Lys | Ala | Ile | Ala | Leu | Gin | | |
| 141 | | 130 | | | | | 135 | | | | | | | 140 | | | | |
| 143 | gcc | tac | aat | aac | gtc | ctt | ccq | cgt | cag | cat | aat | ccc | aaa | ggg | caa | tac | | 480 |
| 144 | Ala | Tyr | Asn | Asn | Val | Leu | Arg | Arg | Gln | His | Asn | Pro | Lys | Gly | Gin | Tyr | | |
| 145 | 115 | | | | | 150 | | | | 155 | | | | 160 | | | | |
| 147 | dag | aag | tcc | tat | cca | ggg | act | aga | ccc | ctc | aaa | tcc | ctg | ggg | tgt | ccq | | 528 |
| 148 | Glu | Lys | Ser | Tyr | Pro | Gly | Thr | Arg | Pro | Leu | Lys | Ser | Leu | Ala | Val | Pro | | |
| 149 | | | | | | 165 | | | | 170 | | | | 175 | | | | |
| 151 | atg | att | tta | gcc | aac | ctc | acc | ctg | gaa | atg | ttt | aaa | tgg | tta | ttt | ccg | cct | 576 |
| 152 | Met | Ile | Leu | Ala | Asn | Leu | Thr | Ileu | Glu | Met | Glu | Trp | Leu | Leu | Pro | Pro | | |
| 153 | | | | | | 180 | | | | 185 | | | 190 | | | | | |
| 155 | act | acc | gtg | gaa | ggg | gtg | ttt | ggc | caa | acc | gtc | aga | gaa | tgt | atg | acc | | 621 |
| 156 | Thr | Thr | Val | Glu | Glu | Val | Ieu | Ala | Gln | Thr | Val | Arg | Glu | Val | Met | Thr | | |
| 157 | | | | | | 195 | | | | 200 | | | 205 | | | | | |
| 159 | gtt | tcc | ctc | gac | cca | gaa | ata | ggg | tta | atg | ccg | qaa | ccg | gtg | acc | ccc | | 672 |
| 160 | Asp | Phe | Leu | Asp | Pro | Glu | Ile | Gly | Leu | Met | Arg | Glu | Ala | Val | Thr | Pro | | |
| 161 | | | | | | 210 | | | | 215 | | | 220 | | | | | |
| 163 | aca | ggg | gaa | ttt | gtt | gat | act | ttt | gaa | ggg | ccg | ttt | ctc | acc | cca | gga | | 720 |
| 164 | Thr | Gly | Glu | Phe | Val | Asp | Ser | Phe | Glu | Gly | Arg | Leu | Leu | Asn | Pro | Gly | | |
| 165 | 225 | | | | | 230 | | | | 235 | | | 240 | | | | | |
| 167 | cac | ggc | att | gaa | gcc | atg | tgg | tcc | atg | gac | att | gcc | caa | ccg | tcc | | 768 | |
| 168 | His | Gly | Ile | Glu | Ala | Met | Trp | Phe | Met | Asp | Ile | Ala | Gln | Arg | Ser | | | |
| 169 | | | | | | 245 | | | | 250 | | | 255 | | | | | |
| 171 | ggc | gtt | ccg | caq | tta | caq | gaa | qcc | att | qca | gtg | gtg | ttt | acc | acc | | 816 | |
| 172 | Gly | Asp | Arg | Gln | Leu | Glu | Gln | Ala | Ile | Ala | Val | Val | Leu | Asn | Thr | | | |
| 173 | | | | | | 260 | | | | 265 | | | 270 | | | | | |
| 175 | ctg | gaa | tat | gcc | tgg | gtt | gat | gaa | qaa | ttt | qgt | gac | ata | ttt | tat | tcc | ctt | 864 |
| 176 | Leu | Glu | Tyr | Ala | Trp | Asp | Glu | Glu | Phe | Gly | Gly | Ile | Phe | Tyr | Phe | Leu | | |
| 177 | | | | | | 275 | | | | 280 | | | 285 | | | | | |
| 179 | gtt | ccg | caq | ggc | ccg | ccg | cac | cct | ccg | caa | ccg | ata | ttt | ccg | ccg | ccc | | 912 |
| 180 | Asp | Arg | Gln | Gly | His | Pro | Pro | Gln | Gln | Leu | Glu | Trp | Asp | Gln | Lys | Leu | | |
| 181 | | | | | | 290 | | | | 295 | | | 300 | | | | | |
| 183 | tgg | tgg | gtt | cat | tgg | gaa | acc | ctg | gtt | gcc | cta | gcc | aag | ggc | cac | caa | | 960 |
| 184 | Trp | Trp | Val | His | Leu | Glu | Thr | Leu | Val | Ala | Leu | Ala | Lys | Gly | His | Gln | | |
| 185 | 305 | | | | | 310 | | | | 315 | | | 320 | | | | | |
| 187 | gcc | act | ggc | caa | gaa | aaa | tgt | tgg | caa | tgg | ttt | gag | ccg | gtc | cat | gtt | | 1008 |
| 188 | Ala | Thr | Gly | Gln | Glu | Lys | Cys | Trp | Gln | Trp | Phe | Glu | Arg | Val | His | Asp | | |
| 189 | | | | | | 325 | | | | 330 | | | 335 | | | | | |
| 191 | tac | gcc | tgg | agt | cat | ttc | ggc | gtt | gat | ttt | qgg | gaa | tgg | ttt | ggc | | 1056 | |
| 192 | Tyr | Ala | Trp | Ser | His | Phe | Ala | Asp | Pro | Glu | Tyr | Gly | Glu | Trp | Phe | Gly | | |
| 193 | | | | | | 340 | | | | 345 | | | 350 | | | | | |
| 195 | tac | ctg | aat | ccg | ccg | ggg | gaa | qag | ttt | tta | ctc | aac | cta | aaa | ggg | ggg | aaa | 1104 |
| 196 | Tyr | Leu | Asn | Arg | Arg | Gly | Gln | Val | Leu | Leu | Asn | Leu | Lys | Gly | Gly | Lys | | |
| 197 | | | | | | 355 | | | | 360 | | | 365 | | | | | |
| 199 | tgg | aaa | ggg | tgc | tcc | cc | cc | gtt | cc | act | ctt | ttt | qgt | ccg | qaa | | 1152 | |
| 200 | Trp | Lys | Gly | Cys | Phe | His | Val | Pro | Arg | Ala | Leu | Trp | Leu | Cys | Ala | Glu | | |
| 201 | | | | | | 370 | | | | 375 | | | 380 | | | | | |
| 203 | act | ctc | caa | ctt | ccq | gtt | agt | | | | | | | | | | 1173 | |

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/645,321

DATE: 09/14/2000
TIME: 16:50:58

Input Set : A:\Cpg.pto
Output Set: N:\CRF3\09142000\I645321.raw

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204 Thr Leu Gln Leu Pro Val Ser
205 385 390
208 <210> SEQ ID NO: 3
209 <211> LENGTH: 24
210 <212> TYPE: DNA
211 <213> ORGANISM: Artificial Sequence
213 <220> FEATURE:
214 <223> OTHER INFORMATION: Synthetic DNA
216 <400> SEQUENCE: 3
217 qtgttaaqtcttcaatataggg gtgt 24
220 <210> SEQ ID NO: 4
221 <211> LENGTH: 26
222 <212> TYPE: DNA
223 <213> ORGANISM: Artificial Sequence
225 <220> FEATURE:
226 <223> OTHER INFORMATION: Synthetic DNA
228 <400> SEQUENCE: 4
229 tcacaggatcc caaccaaggca gcggaa 36
232 <210> SEQ ID NO: 5
233 <211> LENGTH: 32
234 <212> TYPE: DNA
235 <213> ORGANISM: Artificial Sequence
237 <220> FEATURE:
238 <223> OTHER INFORMATION: Synthetic DNA
240 <400> SEQUENCE: 5
241 tttatcgata ttaatttaggg ggaatgaatg ag 32
244 <210> SEQ ID NO: 6
245 <211> LENGTH: 33
246 <212> TYPE: DNA
247 <213> ORGANISM: Artificial Sequence
249 <220> FEATURE:
250 <223> OTHER INFORMATION: Synthetic DNA
252 <400> SEQUENCE: 6
253 ttggatcct cattattccc cctgattttt gaa 33
256 <210> SEQ ID NO: 7
257 <211> LENGTH: 36
258 <212> TYPE: DNA
259 <213> ORGANISM: Artificial Sequence
261 <220> FEATURE:
262 <223> OTHER INFORMATION: Synthetic DNA
264 <400> SEQUENCE: 7
265 taaatcgata ttgttatgtat tqcccatcgc cgtcag 36
268 <210> SEQ ID NO: 8
269 <211> LENGTH: 36
270 <212> TYPE: DNA
271 <213> ORGANISM: Artificial Sequence
273 <220> FEATURE:
274 <223> OTHER INFORMATION: Synthetic DNA
276 <400> SEQUENCE: 8

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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/645,321

DATE: 09/14/2000
TIME: 16:50:58

Input Set : A:\Cpg.pto
Output Set: N:\CRF3\09142000\I645321.raw

277 aaaggatcct taactaaccg gaagttggag aqtttc

36

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/645,321

DATE: 09/14/2000
TIME: 16:50:59

Input Set : A:\Cpg.pto
Output Set: N:\CRF3\09142000\I645321.raw

L:12 M:270 C: Current Application Number differs. Replaced Current Application No
L:12 M:271 C: Current Filing Date differs. Replaced Current Filing Date

OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/645,321

DATE: 09/06/2000
TIME: 11:55:35

Input Set : A:\5.1183 sequence.txt
Output Set: N:\CRF3\09062000\1645321.raw

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3 <110> APPLICANT: Satoshi KOIZUMI
4 Kazuhiko TABATA
5 Tetsuo ENDO
6 Akio OZAKI
8 <120> TITLE OF INVENTION: Process for producing N-acetylneuraminic acid
10 <130> FILE REFERENCE: 11229
C--> 12 <140> CURRENT APPLICATION NUMBER: US/09/645,321
C--> 12 <141> CURRENT FILING DATE: 2000-08-25
12 <150> PRIOR APPLICATION NUMBER: H11-242670
13 <151> PRIOR FILING DATE: 1999-08-30
15 <160> NUMBER OF SEQ ID NOS: 8
17 <170> SOFTWARE: PatentIn Ver. 2.0

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ERRORED SEQUENCES

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101 <210> SEQ ID NO: 2
102 <211> LENGTH: 1173
103 <212> TYPE: DNA
104 <213> ORGANISM: Synechocystis sp. (PCC6803)
106 <400> SEQUENCE: 2
E--> 107 atg att gcc cat cgc cgt cag gag tta gcc cag caa tat tac cag gct
E--> 108 48
109 Met Ile Ala His Arg Arg Gln Glu Leu Ala Gln Gln Tyr Tyr Gln Ala
110 1 5 10 15
E--> 112 tta cac cag gac gta ttg ccc ttt tgg gaa aaa tat tcc ctc gat cgc
E--> 113 96
114 Leu His Gln Asp Val Leu Pro Phe Trp Glu Lys Tyr Ser Leu Asp Arg
115 20 25 30
E--> 117 cag ggg ggc ggt tac ttt acc tgc tta gac cgt aaa ggc cag gtt ttt
E--> 118 144
119 Gln Gly Gly Gly Tyr Phe Thr Cys Leu Asp Arg Lys Gln Val Phe
120 35 10 45
E--> 122 gac aca gat aaa ttc att tgg tta caa aac cgt cag gta tgg cag ttt
E--> 123 192
124 Asp Thr Asp Lys Phe Ile Trp Leu Gln Asn Arg Gln Val Trp Gln Phe
125 50 55 60
E--> 127 gcc gtt ttc tac aac cgt ttg gaa cca aaa ccc caa tgg tta gaa att
E--> 128 240
129 Ala Val Phe Tyr Asn Arg Leu Glu Pro Lys Pro Gln Trp Leu Glu Ile
130 65 70 75 80
E--> 132 gcc cgc cat ggt gct gat ttt tta gct cgc cac ggc cga gat caa gac
E--> 133 288
134 Ala Arg His Gly Ala Asp Phe Leu Ala Arg His Gly Arg Asp Gln Asp
135 85 90 95
E--> 137 ggt aat tgg tat ttt gct ttg gat cag gaa ggc aaa ccc ctg cgt caa
E--> 138 336

```

Does Not Comply
Corrected Diskette Needed

The file is corrupt.
The sequence numbers are wrapped around the line.
This is a hard break error.
Possible "Hard" break error
page 1

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/645,321

DATE: 09/06/2000
TIME: 11:59:35

Input Set : A:\5.1183 sequence.txt
Output Set: N:\CRF3\09062000\I645321.raw

139 Gly Asn Trp Tyr Phe Ala Leu Asp Gln Glu Gly Lys Pro Ieu Arg Gln
140 100 105 110
E--> 142 ccc tat aac gtt ttt tcc gat tgc ttc gcc gcc atg gcc ttt agt caa
E--> 143 384
144 Pro Tyr Asn Val Phe Ser Asp Cys Phe Ala Ala Met Ala Phe Ser Gln
145 115 120 125
E--> 147 tat gcc tta gcc agt ggg gcg cag gaa gct aaa gcc att gcc ctg cag
E--> 148 432
149 Tyr Ala Leu Ala Ser Gly Ala Gln Glu Ala Lys Ala Ile Ala Leu Gln
150 130 135 140
E--> 152 gcc tac aat aac gtc cta cgc cgt cag cac aat ccc aaa ggt caa tac
E--> 153 480
154 Ala Tyr Asn Asn Val Leu Arg Arg Gln His Asn Pro Lys Gly Gln Tyr
155 145 160 165 160
E--> 157 gag aag tcc tat cca ggt act aga ccc ctc aaa tcc ctg gcg gtg ccc
E--> 158 528
159 Glu Lys Ser Tyr Pro Gly Thr Arg Pro Leu Lys Ser Leu Ala Val Pro
160 165 170 175
E--> 162 atg att tta gcc aac ctc acc ctg gag atg gaa tgg tta tta ccc ccc
E--> 163 576
164 Met Ile Leu Ala Asn Leu Thr Leu Glu Met Glu Trp Leu Leu Pro PRO
165 180 185 190
E--> 167 act acc gtg gaa gag gtg ttg gcc caa acc gtc aga gaa gtg atg acg
E--> 168 624
169 Thr Thr Val Glu Glu Val Leu Ala Gln Thr Val Arg Glu Val Met Thr
170 195 200 205
E--> 172 gat ttc ctc gac cca gaa ata gga tta atg cgg gaa gcg gtg acc ccc
E--> 173 672
174 Asp Phe Leu Asp Pro Glu Ile Gly Leu Met Arg Glu Ala Val Thr Pro
175 210 215 220
E--> 177 aca gga gaa ttt gtt gat agt ttt gaa ggg cgg ttg ctc aac cca gga
E--> 178 720
179 Thr Gly Glu Phe Val Asp Ser Phe Glu Gly Arg Leu Leu Asn Pro Gly
180 225 230 235 240
E--> 182 cac ggc att gaa gcc atg tgg ttc atg atg gac att gcc caa cgc tec
E--> 183 768
184 His Gly Ile Glu Ala Met Trp Phe Met Met Asp Ile Ala Gln Arg Ser
185 245 250 255
E--> 187 ggc gat cgc cag tta cag gag caa gcc att gca gtg gtg ttg aac acc
E--> 188 816
189 Gly Asp Arg Gln Leu Gln Glu Gln Ala Ile Ala Val Val Asn Thr
190 260 265 270
E--> 192 ctg gaa tat gcc tgg gat gaa gaa ttt ggt ggc ata ttt tat ttc ctt
E--> 193 864
194 Leu Glu Tyr Ala Trp Asp Glu Glu Phe Gly Gly Ile Phe Tyr Phe Leu
195 275 280 285
E--> 197 gat cgc cag ggc cac ccc cca cca ctg gaa tgg gac caa aag ctc
E--> 198 912
199 Asp Arg Gln Gly His Pro Pro Gln Gin Leu Glu Trp Asp Gln Lys Leu

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/645,321

DATE: 09/06/2000
TIME: 11:55:35

Input Set : A:\5.1183 sequence.txt
Output Set: N:\CRF3\09062000\1645321.raw

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200      290          295          300
E--> 202 tgg tgg gta cat ttg gaa acc ctg gtt gcc cta gcc aag ggc cac caa
E--> 203 960
204 Trp Trp Val His Leu Glu Thr Leu Val Ala Leu Ala Lys Gly His Gln
205 305          310          315          320
E--> 207 gcc act ggc caa gaa aaa tgt tgg caa tgg ttt gag cgg gtc cat gat
E--> 208 1008
209 Ala Thr Gly Gln Glu Lys Cys Trp Gln Trp Phe Glu Arg Val His Asp
210          325          330          335
E--> 212 tac gcc tgg agt cat ttc gcc gat cct gag tat ggg gaa tgg ttt ggc
E--> 213 1056
214 Tyr Ala Trp Ser His Phe Ala Asp Pro Glu Tyr Gly Glu Trp Phe Gly
215          340          345          350
E--> 217 tac ctg aat cgc cgg gga gag gtg tta ctc aac cta aaa ggg ggg aaa
E--> 218 1104
219 Tyr Leu Asn Arg Arg Gly Glu Val Leu Leu Asn Leu Lys Gly Gly Lys
220          355          360          365
E--> 222 tgg aaa ggg tgc ttc cac gtg ccc cga gct ctg tgg ctc tgt gcg gaa
E--> 223 1152
224 Trp Lys Gly Cys Phe His Val Pro Arg Ala Leu Trp Leu Cys Ala Glu
225          370          375          380
E--> 227 act ctc caa ctt ccg gtt agt
E--> 228 1173
229 Thr Leu Gin Leu Pro Val Ser
230          385          390
231 <210> SEQ ID NO: 3
232 <211> LENGTH: 24
233 <212> TYPE: DNA
234 <213> ORGANISM: Artificial Sequence
235 <214> FEATURE:
236 <215> OTHER INFORMATION: Synthetic DNA
237 <216> SEQUENCE: 3
238 <217> 100> SEQUENCE: 3
E--> 242 gtgtaaacct tctgtatggg gtgt
243          24
244 <210> SEQ ID NO: 1
245 <211> LENGTH: 26
246 <212> TYPE: DNA
247 <213> ORGANISM: Artificial Sequence
248 <214> FEATURE:
249 <215> OTHER INFORMATION: Synthetic DNA
250 <216> SEQUENCE: 1
251 <217> 100> SEQUENCE: 1
E--> 255 gcaggatcc caaccaggca gcggaa
256          26
257 <210> SEQ ID NO: 5
258 <211> LENGTH: 32
259 <212> TYPE: DNA
260 <213> ORGANISM: Artificial Sequence
261 <214> FEATURE:
262 <215> OTHER INFORMATION: Synthetic DNA
263 <216> SEQUENCE: 5
264 <217> 100> SEQUENCE: 5

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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/645,321

DATE: 09/06/2000
TIME: 11:55:32

Input Set : A:\5.1183 sequence.txt
Output Set: N:\CRF3\09062000\I645321.raw

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267 <400> SEQUENCE: 3
E--> 268 tttatcgata ttaatttaggg ggaatgaatg ag
269      32
272 <210> SEQ ID NO: 6
273 <211> LENGTH: 33
274 <212> TYPE: DNA
275 <213> ORGANISM: Artificial Sequence
277 <220> FEATURE:
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300 <212> TYPE: DNA
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303 <220> FEATURE:
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306 <400> SEQUENCE: 8
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E--> 308 36

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Same
for
P.